ABSTRACT OF THE DISCLOSURE

A catalytic hydrocracking process wherein a hydrocarbonaceous feedstock and a liquid recycle stream is contacted with hydrogen in a hydrocracking reaction zone at elevated temperature and pressure to obtain conversion to lower boiling hydrocarbons. A liquid hydrocarbonaceous stream produced from the effluent of the hydrocracking reaction zone is fractionated in a first zone of a divided-wall fractionation zone to produce at least one liquid hydrocarbonaceous product stream and a liquid hydrocarbonaceous stream containing hydrocarbons boiling at a temperature in the boiling range of the feedstock and heavy polynuclear aromatic compounds. At least a portion of the liquid hydrocarbonaceous stream containing heavy polynuclear aromatic compounds is introduced into a second zone of the divided-wall fractionation zone to produce a stream rich in polynuclear aromatic compounds. At least another portion of the liquid hydrocarbonaceous stream containing hydrocarbons boiling at a temperature in the boiling range of the feedstock is recycled to the hydrocracking reaction zone.